

## A B S T R A C T

The invention provides a method of fabricating a steel part by forging, the method being characterized by the following steps:

- 5       • preparing and casting a steel having the following composition in percentages by weight:  $0.06\% \leq C \leq 0.35\%$ ;  $0.5\% \leq Mn \leq 2\%$ ;  $traces \leq Si \leq 2\%$ ;  $traces \leq Ni \leq 1.5\%$ ;  $traces \leq Al \leq 0.1\%$ ;  $traces \leq Cr \leq 1.5\%$ ;  $traces \leq Mo \leq$   
10     $0.30\%$ ;  $traces \leq V \leq 0.5\%$ ;  $traces \leq Cu \leq 1.5\%$ ; the remainder being iron and impurities that result from preparation;
- forging a blank for the part at a temperature in the range  $110^{\circ}C$  to  $1300^{\circ}C$ ;
- 15       • cooling the blank for the part in controlled manner in still or forged air at a speed less than or equal to  $3^{\circ}C/s$  in the range  $600^{\circ}C$  to  $300^{\circ}C$ , thereby imparting a bainite microstructure to the blank;
- machining the part; and
- 20       • performing a mechanical reinforcing operation on the part at locations that are to be subjected to particularly high levels of stress.

The invention also provides a forging obtained in this way.